APPENDIX I

DIVE & SURFACE OBSERVATIONS

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Marine and Coastal Environmental Sciences

Technical Memorandum

COPY

23 April 2001

To: Simon Poulter (Padre Associates) VIA FACSIMILE (3 pages)

From: Ray de Wit

Subject: Dive and Surface Observations, Bird Island (ARCO PRC 471 Pier)

Simon: The following is a brief summary of our collective observations made during a series of dives and on-boat observations at the subject site. This information should be of use in discussions with the State Lands Commission on the underwater visibility and on the potential problems in obtaining additional diver-biologist field information at the site in time for the Draft EIR.

1) The first series of dives was completed on 20 March 2001; on that day we also completed an "outline" of the surficial kelp beds at the site. Mapping of that surface kelp was subsequently provided to L. A. de Wit, Consultant by Fugro-West (see attached map). We also made qualitative observations (presence/absence) observations of the avifauna on the platform portion of the pier. Two commercial trap buoys were sited near the pier; one each on the east and west sides of the pier in approximately 30 ft of water. The second series of dives was completed on 17 April 2001.

2) On 20 March 2001, we completed surveys at four proposed anchor locations (A-1 and A-2) and along the anchor line corridors associated with each of those four sites (designated as "short and long" for each anchor site based on the length of the proposed anchor lines shown in the attached figure). Dives at Anchor sites A-3 and A-4, along the two anchor line corridors from each, and a "spot" dive at Anchor site A-5 were completed on 17 April 2001. The dive at A-5 was completed to confirm poor visibility at the inshore (-20 ft) stations. Visibility during both surveys ranged from near 0 to approximately 3 ft, and poor water clarity precluded underwater photography and video. Concern over diver safety related to the poor visibility and the reported presence of exposed steel in and around the platform precluded underwater observations at that location.

3) Birds: (20 March 2001) Gulls (common); brown pelicans (common); cormorants (abundant); western grebes (present to common). Present=3-5 individuals; common=6-10; abundant >10. (17 April 2001) Cliff swallows (est. 35-40, nesting in/on steel support structure of the platform); cormorants, including double crested, Brandts, and pelagic (est. 30-35 with 7 nests observed on the south and west-facing portions of the pier platform); brown pelicans (est. 20), pigeons (est. 5).

Kelp: The surface kelp was healthy and was thickest immediately to the east of the platform. Smaller patches were observed to the west and immediately south of the pier platform. The attached map indicates general agreement with the kelp areas mapped by Fugro-West in November 1999. Kelp was still thick and covered the same general area on 17 April 2001; no additional mapping of surface kelp was completed.

Marine Habitats and Biota: The four anchor locations observed were all in sedimentary habitat. The solid substrate, comprising low (<0.5 ft) to medium (up to 3 ft) relief rock ridges, was generally observed in approximately 40 ft (MLLW) and within approximately 30 ft of the proposed anchor locations. Most of the rock habitat on the eastern side (Sites A-3 and A-4) had kelp and abundant urchins; gorgonian coral (*Lophogorgia* spp) were present but not common in the deeper portions of the rock habitat.

The western (A-1 and A-2 anchor corridors).rocky habitat had less kelp, fewer urchins, and was generally lower relief (1-2 ft maximum vertical relief) than the eastern area.

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Based on the two attempts and on discussions with local urchin divers, the site has notoriously poor underwater visibility. The objects of the dives along the anchor corridors are not only to characterize the habitat but also to make recommendations on moving the anchors. The latter objective cannot be fulfilled with poor water clarity and it appears that water clarity sufficient to complete that objective will not be present until later in the year (estimated late May or June). It is obvious that there is rocky habitat along the four corridors observed and at the proposed Anchor A-5 location. Kelp is thick throughout the eastern portion of the anchoring areas and is likely to be impacted irrespective of anchor locations there.

Further, the pier platform appears to be used as a spring nesting site for cormorants and swallows. Cormorants were "sitting" on the 7 nests observed; no pelicans were observed to be nesting/roosting. At least two commercial crab/lobster trap marker buoys were observed near the pier platform and within the anchoring area.

Please contact me should you or the State Lands Commission have any questions or require additional information. The results of the completed dives will be used to characterize the habitats and biota; additional dives could be completed when water clarity improves.

Ray DeWit

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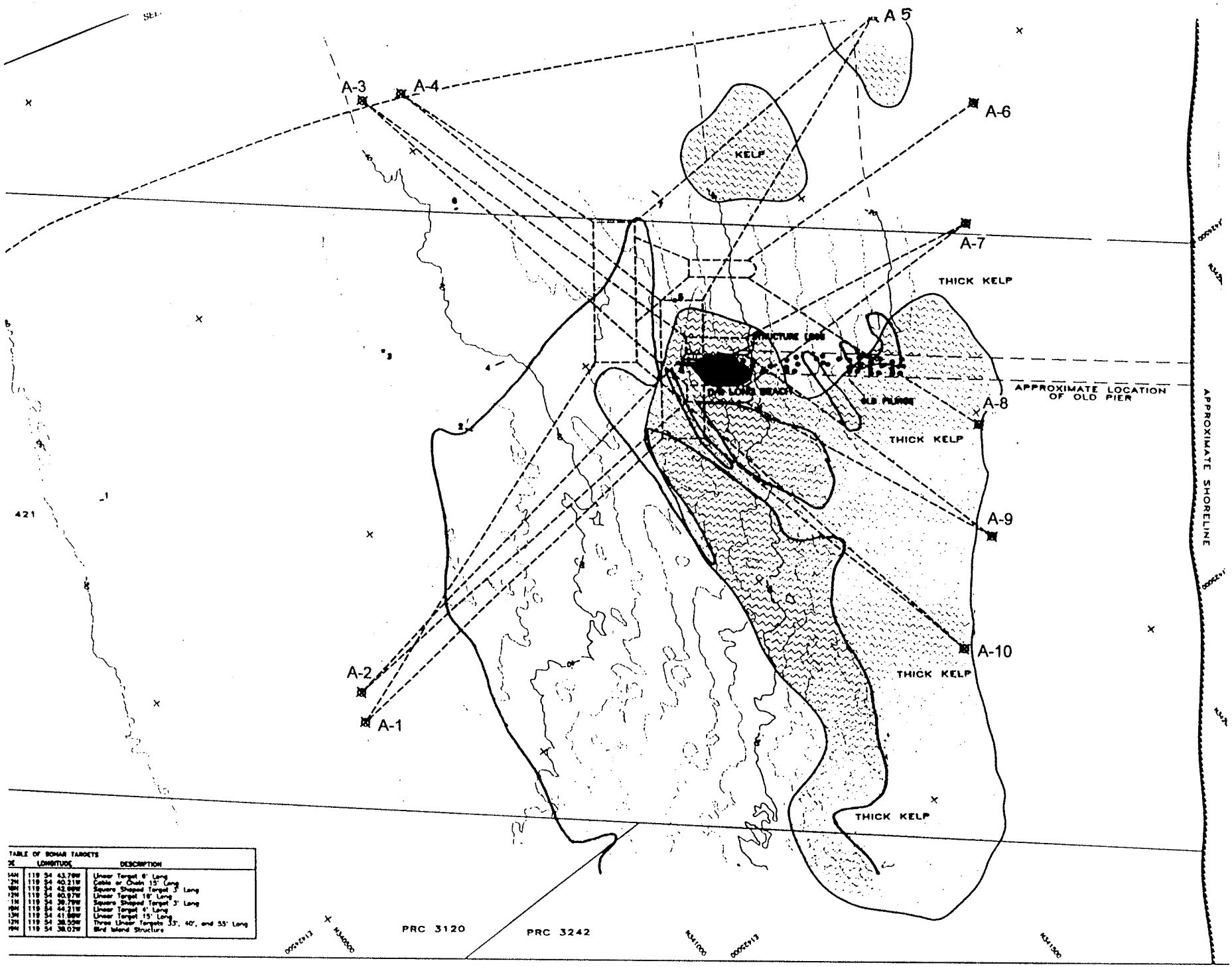
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APPROXIMATE LOCATION OF OLD PIER
APPROXIMATE SHORELINE
PRC 3120
PRC 3242
421
TABLE OF SONAR TARGETS
DESCRIPTION

MARINE BIOLOGICAL RESOURCES AND HABITATS
ARCO ELLWOOD PIER (PRC-421)

Existing Conditions

The following summarizes the marine biological resources and habitats within the region (Coal Oil Point to Ellwood Pier) and project site. The discussions are based on literature and site-specific field data, including side scan sonar and diver-biologist observations at the site.

Regional Characterization

Habitats and Marine Biota

Centaur, 1984 characterizes the regional nearshore habitats (water depths ≤ 120 ft) as a mixture of rock outcrops and sediment. That report indicates that rocky substrate is limited to water depths of approximately 45 ft or less, with sedimentary substrate in deeper water. As part of an EIR for ARCO's proposed Coal Oil Point project, comprising two new offshore platforms and oil pipelines to the Ellwood area, the habitats and marine biological resources were described by Chambers Consultants and Planners, 1985. Utilizing literature and field data, Chambers described the inter- and subtidal and marine habitats and biota from Gaviota to Santa Barbara, including those within PRC 421. Diver-biologist surveys along the three proposed pipeline routes (Ellwood Pier, Corral/Las Flores Canyons, and the Aminoil Marine Terminal) indicated that kelp was present at the Ellwood and Corral/Las Flores sites with densities ranging from 0.03 to 0.10 per m^2. During the dives from –40 ft to shore, Chambers, 1985 found that the kelp density along the Ellwood route "...was much sparser..." and there were "...fewer rocks..." than at the Corral/Las Flores site. Another large brown alga, *Desmarestia munda*, was also common at the Ellwood site. Common kelp-associated fish along the Ellwood route included senoritas (*Oxyjulis californica*), kelp bass (*Paralabrax clathratus*), pile perch (*Damalichthys vacca*), and kelp fish (multiple genera), Chambers, 1985.

Marine Birds and Mammals

Chambers, 1985, citing counts made from 1975 through 1978, lists 13 cetaceans (baleen and toothed whales) as being present within the Santa Barbara Channel. Of these, three are likely to occur within the project site: common dolphin (*Delphinus delphis*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), and during their bi-annual migration periods, grey whales (*Eschichtius robustus*). Common pinnipeds within the site include the California sealion (*Zalophus californianus*) and harbor seals (*Phoca vitulina*). Northern sea otters (*Enhydra lutris*) have been observed within the Santa Barbara Channel, as far south as Santa Barbara Harbor, since the mid 1990s. Harris, pers. comm. indicated that otter abundance south of Point Conception tends to increase in December with relatively low summer (July to September) abundance as the majority of the otters are found in the center of their distribution along the central coast.

Chambers, 1985 lists 30 marine birds observed around the Coal Oil Point project during field surveys. Dominated by gulls (7 species) and offshore (pelagic) species such as shearwaters and storm petrels, that report indicated that "no marine bird species are known to breed in the immediate vicinity of Coal Oil Point."

Project Site

Habitats and Marine Biota

Anchor Locations and Anchor Line Corridors: Within the project site, side scan sonar records from a survey conducted in March 1999 (Fairweather Pacific, 2000) showed the seafloor in water depths of ≥20 ft to generally comprise a mixture of sediment and rock with the sedimentary substrate most common to the west of the remnant pier and rocky outcrops to the east of that structure. "Thick kelp" was present on rocky substrate, precluding the survey vessel from collecting data in some site areas. Utilizing onboard differential GPS the surficial kelp at the site was plotted during the March 2001 biological survey. The results of that plotting are shown in Figure 1.

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